Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday, November 5, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from October 30 through November 5, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of backfill placement, trench cleaning, and slurry stabilization.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Aerotek (air monitoring subcontractor)
URS (primary consultant for Solutia)

Work Performed This Week

Work at Site R continued with 960 cubic yards of backfill placed into the open trench in the northern portion of the site on four days during the week. To continue the slurry stabilization, cement was added to cells containing slurry within the bermed area on top of the landfill.

By the end of the week, the remaining open trench decreased to approximately 417 feet in length. Trench excavation is 100 percent complete, and backfill activities were approximately 99 percent complete at the end of the reporting period.

Solutia anticipates that the backfill operation to construct the barrier wall will be completed during the upcoming week. Subsequently, slurry stabilization, barrier wall cap construction and site grading, and demobilization of equipment will continue as the primary activities at the site.

Groundwater Migration Control System (GMCS)

The river elevation increased substantially during the week, rising from 384.63 feet above mean sea level (amsl) on October 29 to 393.02 feet amsl on November 5. Correspondingly, the GMCS combined system flow rate decreased during the week from approximately 1,140 gpm on October 29, to 490 gpm on November 5. The GMCS continuously pumped groundwater throughout the week.

Eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, monitored the groundwater elevations adjacent to the barrier wall alignment during the week. Table 1 shows the river and piezometer water elevations measured on November 5, 2004 (3:00 PM). The barrier wall has been constructed adjacent to all piezometer pairs.

Following the sharp rise in the river level which began on November 1, the four pairs of piezometers each showed an inward gradient across the barrier wall, with water levels ranging between 1 and 8 feet higher in the piezometers located on the outside of the barrier wall alignment. Piezometer pairs P1 and P4 showed an inward gradient across the barrier wall throughout the reporting period. The water elevation in the piezometer P2W, located outside

the barrier wall alignment, was lower than the elevation in the paired piezometer located inside the wall (P2E) for approximately 2 days at the beginning of the reporting period. Piezometer P3E was offline until November 1.

From November 1 onward during the reporting period, the four piezometers located inside of barrier wall recorded water elevations between 1 to 10 feet lower than the river level, indicating an inward groundwater gradient toward Site R. Piezometer P1S, located inside the barrier wall, showed water elevations throughout the week lower than the river. Piezometers P2E and P4E however, recorded elevations greater or equivalent to the river level, with fluctuations, between October 30 and November 1.

TABLE 1
River and Piezometer Water Elevations – November 5, 2004 (15:00)

	Elevation (ft above mean sea level)
River Level	393.02
Piezometer 1S – inside wall (northern-most pair)	385.32
Piezometer 1N – outside wall (northern-most pair)	390.77
Piezometer 2E – inside wall (north-central pair)	386.65
Piezometer 2W – outside wall (north-central pair)	392.17
Piezometer 3E – inside wall (south-central pair)	386.63
Piezometer 3W – outside wall (south-central pair)	391.49
Piezometer 4E – inside wall (southern-most pair)	386.89
Piezometer 4W – outside wall (southern-most pair)	390.37

Barrier Wall Construction

Inquip has completed excavation of the barrier wall to total depth, and during the week the backfill continued to stack along the northern leg of the barrier wall towards the northeast terminus at station 37+93. During the week the open trench decreased by approximately 120 linear feet as backfill 'daylighted' to ground surface at station 33+80. The remaining open trench extends from station 33+80 to station 37+93, approximately 417 feet in length.

The Liebherr 853 hydraulic clamshell was utilized during the week for trench cleaning prior to backfill placement. The Liebherr 855 mechanical clamshell and Koehring 1266 trackhoe remain onsite awaiting demobilization.

During the week, the depth of the open trench was measured daily. Table 2 summarizes the trench profile that was measured on the morning of November 5. On Graph 1, the current trench profile is depicted in comparison with the trench profile measured on October 29. Graph 2 shows the overall progress of the barrier wall construction.

Barrier Wall Cap Construction and Site Grading

Due to the stormwater that had accumulated at the site during the week, barrier wall cap construction and site grading were halted. These activities will continue during the upcoming week.

Slurry

No fresh slurry was mixed or utilized during the week. Trench slurry samples were collected from the trench and were tested for viscosity, density (unit weight), filtrate loss, pH and sand content. Analysis of trench slurry samples either met the specifications or satisfied the quality targets. The sand content in slurry samples remained at approximately 20 percent throughout the week. The unit weight of trench slurry ranged from 84 to 87 pounds per cubic foot (pcf), approximately 39 pcf lighter than the backfill placed. Viscosity of the slurry has increased significantly as expected with the closure of the trench. Trench slurry was recirculated during the week near the northeast trench terminus through the desander unit in order to improve the slurry sand content. Excess trench slurry was pumped from the open trench at station 37+93 to the north containment berm on top of the landfill.

Slurry stabilization continued during the week with cement added to the trench slurry within 50 by 50 feet cells constructed within the southern containment berm on top of the landfill. Trench slurry was pumped into the cells, the Portland cement mixture was added and stirred into the slurry by a trackhoe. Inquip will continue to monitor the stabilization cells as the slurry hardens.

Spoils Handling

During the week, spoils were transferred from the temporary stockpile on top of the landfill to the backfill mix pad near station 33+60.

Backfill and Trench Cleaning

During the week, Inquip mixed and placed approximately 960 cubic yards of backfill material into the open trench. Backfill operations took place on four days during the reporting period. Backfill spoils were mixed with approximately two percent of dry bentonite and slurry as necessary to meet quality specifications.

Backfill was tested for unit weight, slump and moisture content. The unit weight for backfill placed this week ranged from 122 to 127.5 pcf. Slump results varied between 4 and 4.5 inches, and the moisture content result ranged between 20 and 24 percent. Tests on the backfill mixture to be conducted offsite by Mueser-Rutledge and Golder laboratories included permeability and gradation. Test results reviewed during the week met the quality specifications.

Stormwater

Rain during the week caused significant pooling of stormwater on site. Stormwater was pumped throughout the week to the modutanks. As necessary, stormwater was flocculated and discharged to the American Bottoms Regional Treatment Facility (ABRTF).

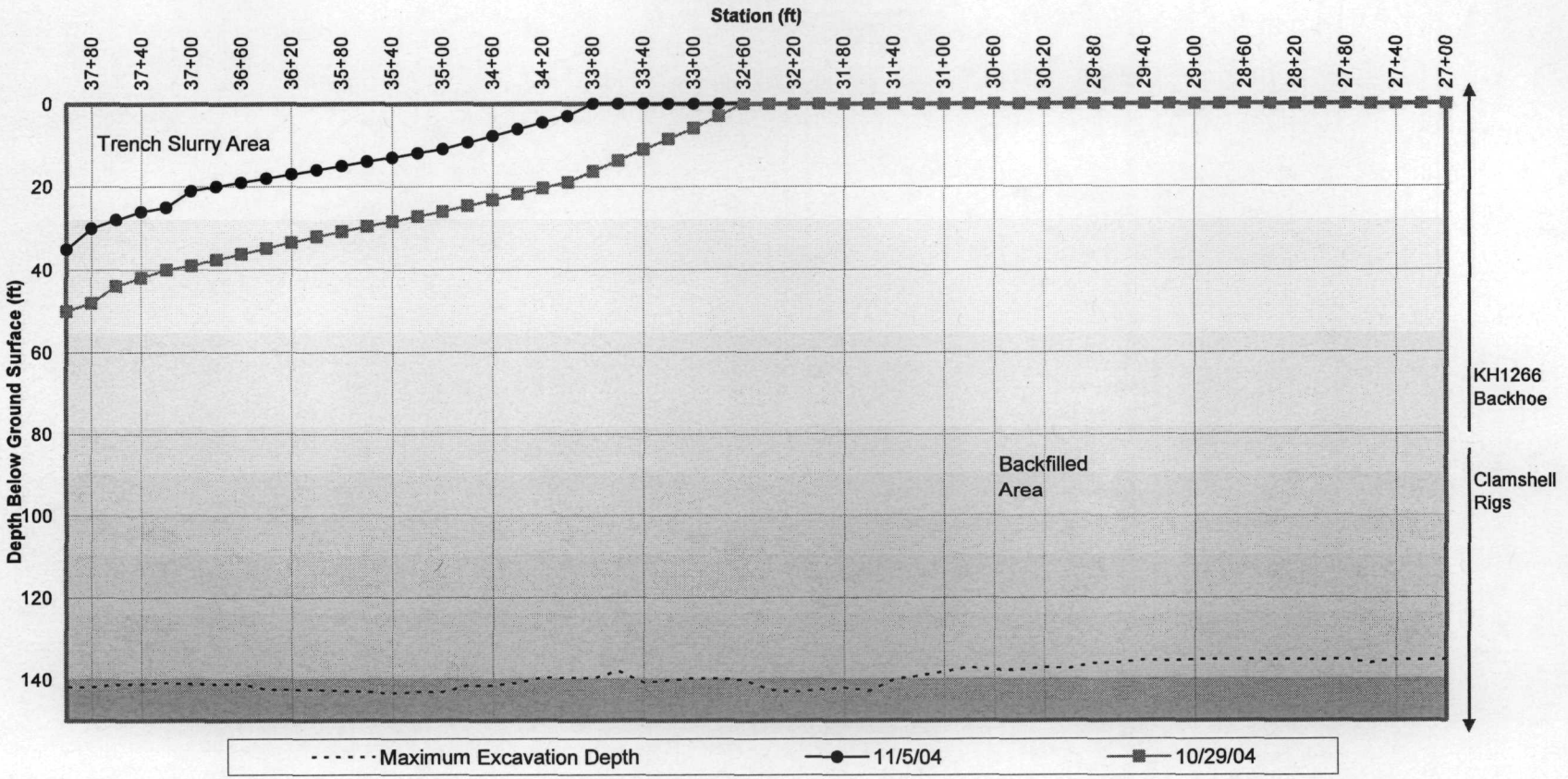
Other Activities

Aerotek performed the routine air monitoring conducted at Site R on five days during the reporting period.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench –October 29, 2004 (AM)

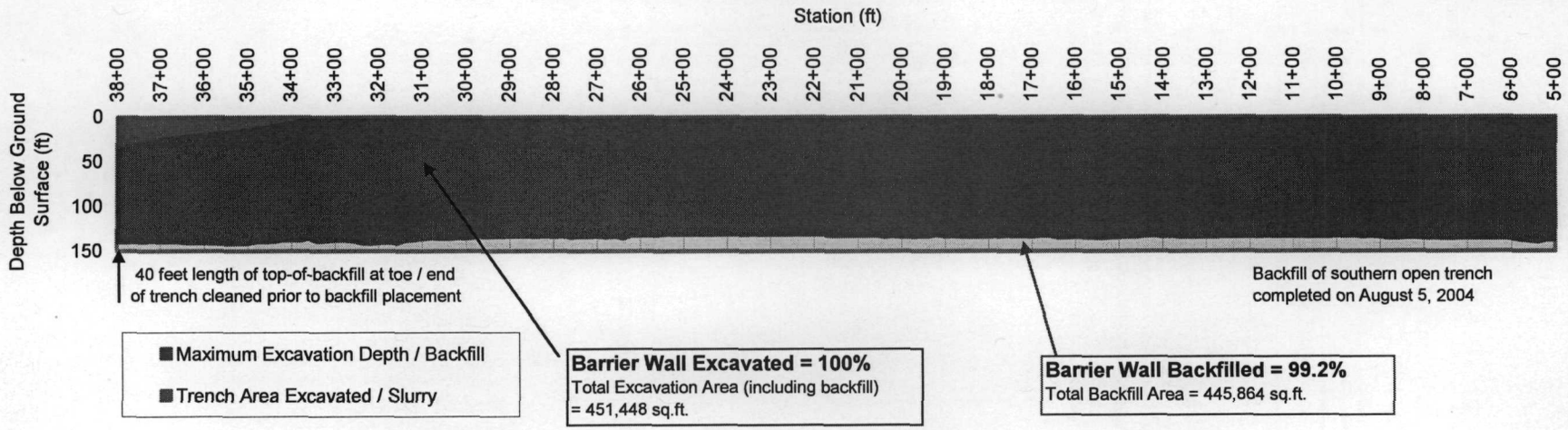
Station ID	Depth to bottom (ft below ground surface)
32+60	0
33+00	6
34+00	19
35+00	26
36+00	32
37+00	39
37+20	40
37+40	42
37+60	44
37+80	48
37+93	50

Graph 1 - Weekly Barrier Wall Construction Progress - Open Trench Segment
October 30 through November 5, 2004



Note: Data plotted for the week through measurements on 10/30/04 and 11/5/04.
Some data points are interpolated between the available data points where trench depths were read.

Graph 2 - Barrier Wall Construction Progress by November 5, 2004 (AM)



Note: Data plotted for the week through AM measurements on 11/5/04

Photos for the week ending November 5, 2004

Stormwater ponded at the site during heavy rains during the week. (November 2, 2004)

Backfill mixing and placement continued during the week. (November 4, 2004)